

CLAIMS

1. A data output method for rendering at an output device content at least partly accessible with an information apparatus, comprising:

obtaining at the information apparatus one or more rasterization parameters corresponding to the output device;

conforming at the information apparatus at least part of the data content into one or more output images with said one or more rasterization parameters;

transmitting an intermediate output data from the information apparatus to an output controller that is distinct from the information apparatus and associated with the selected output device, the intermediate output data including said one or more output image;

converting at the output controller, the intermediate output data into an output data acceptable for rendering at the output device.

2. The method of claim 1 comprising obtaining the one or more rasterization parameters from one or more of the output device or user input or default value.

3. The method of claim 1 in which the one or more output images are associated with different slides, pages or cards.

4. The method of claim 1 in which the conforming includes one or more of a rasterization operation, a scaling operation, an interpolation operation, and a compression operation.

5. The method of claim 1 in which the content includes text or graphics elements and the conforming of at least part of the content include rasterizing the content into image form.

6. The method of claim 1 comprising transmitting the intermediate output data by wireless communication.

7. The method of claim 1 in which the output controller is included in the output device.

8. The method of claim 1 further comprising performing at the output controller one or more image processing operations on the one or more output images included in the intermediate output

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data, the one or more image processing operations including one or more of a color correction operation, a color matching operation, a color management operation, a scaling operation, an interpolation operation, a color space conversion, a compression operation, and a halftoning operation.

9. The method of claim 1 in which the output device is a printing device and the method further comprising conforming the intermediate output data into a print data that is acceptable to a printer controller associated with the output device.

10. The method of claim 1 further comprising obtaining at the information apparatus a data content for rendering at the selected output device.

11. A data output method for rendering content at least partly accessible with an information apparatus, comprising:

establishing a communication channel between the information apparatus and one or more output devices with short range wireless communication;

conforming at the information apparatus at least part of the data content into one or more output images with at least one predefined or standard rasterization parameters;

generating at the information apparatus a device independent intermediate output data, the intermediate output data including the one or more output images ;

delivering via the established communication channel the intermediate output data from the information apparatus to said one or more output devices for rendering; and

converting at said one or more output devices the intermediate output data into an output data acceptable for rendering by an output engine included in said one or more output devices.

12. The method of claim 11 further comprising discovering the selected output device as one of one or more output devices that are discovered by the information apparatus as being available for rendering the output content.

13. A data output method for rendering at an output device content at least partly accessible with an information apparatus, comprising:

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selecting an output device with an output engine for rendering the data content;

conforming at least part of the content into one or more output images with at least one rasterization parameter related at least in part to the selected output device; generating an intermediate output data that includes said one or more output images;

delivering the intermediate output data for rendering by the selected output device;

receiving at the selected output device the intermediate output data;

performing one or more image processing operations on said one or more output images; and

converting at the selected output device the intermediate output data into an output data acceptable for rendering by the output engine included in the selected output device.

14. The method of claim 13 further comprising discovering the selected output device as one of one or more output devices that are discovered by the information apparatus as being available for rendering the output content.

15. The method of claim 13 in which the information apparatus discovers the one or more output devices with wireless communication.

16. The method of claim 13 in which discovering the one or more output devices includes the information apparatus sending an output service request and awaiting a response from one or more output devices.

17. The method of claim 13 in which discovering the one or more output devices includes one or more output devices posting their availability and the information apparatus contacting one or more of the one or more output devices.

18. The method of claim 13 in which discovering the one or more output devices includes the information apparatus obtaining from a service node information about the one or more output devices and the information apparatus contacting one or more of the one or more output devices.

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19. The method of claim 13 in which discovering one or more output devices involves determining if the one or more output devices satisfy one or more output service requirements.

20. The method of claim 13 further comprising obtaining at least partial output device profile form the one or more output devices that are discovered.

21. The method of claim 13 further comprising providing at the information apparatus information related to the one or more output devices discovered by the information apparatus and obtaining from a user a selection of the selected output device.

22. The method of claim 13 in which the selecting includes automatic selection by one or more components of the information apparatus.

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